# Secondary aortoenteric fistula

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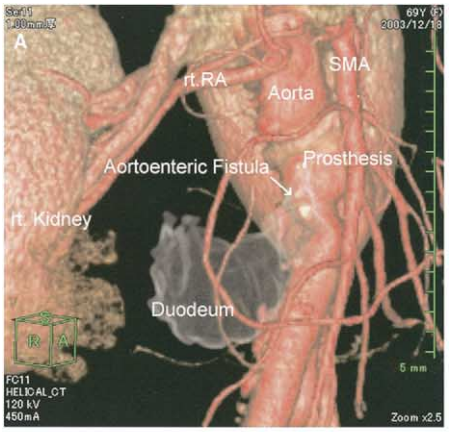
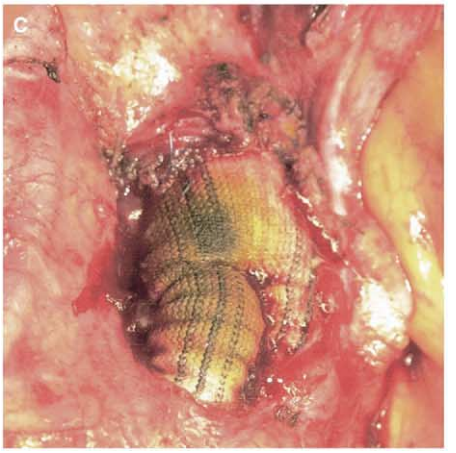
A 64-year-old woman, who had undergone prosthetic replacement of the infrarenal abdominal aorta for an inflammatory aneurysm in 1994, was admitted to a hospital complaining of intermittent high fever in December 2003. *Enterobacter* and *Enterococcus* were identified by blood culture. Gastroduodenoscopy revealed that the prosthetic graft was visible in the third portion of the duodenum (Cover). The patient was transferred to our hospital for treatment of this secondary aortoenteric fistula.

To further evaluate the location of the fistula, multidensity row computed tomography (CT) was performed. In the 3-dimensional reconstruction (A) from this study, the relation between the duodenal lumen and the aortic prosthesis was easily seen. In the virtual endoscopic view (B), we could reproduce almost the same view obtained by gastroduodenoscopy (Cover), which clearly demonstrated the exposed graft in the duodenum.

Segmental resection of the duodenum and duodenojejunal bypass was performed. The prosthesis exposed in duodenum (C) was not removed but wrapped with a vascularized pedicle of the omentum. Postoperative course was uneventful.








## DISCUSSION

Secondary aortoenteric fistula is a rare but fatal complication after abdominal aortic surgery. Making a correct diagnosis can be difficult. The main symptom of this complication of aortic reconstruction is hemorrhage from the upper gastrointestinal tract.[1] Before bleeding, however, most patients have fever as a sign of infection. Diagnosis at this stage is rarely made, but would greatly facilitate surgical management.

The most frequently employed diagnostic investigation for aortoenteric fistula is endoscopic examination of the upper gastrointestinal tract. However, demonstration of the fistula is rare. CT with contrast enhancement can help with the diagnosis by showing suggestive signs of infection, such as presence of gas or liquid surrounding the graft.[2] In the absence of these signs, however, the diagnosis is difficult.

As a novel approach to make correct diagnosis of aortoenteric fistula, we herein report the possibility of virtual endoscopy using CT. With this method, we can obtain the same view as that obtained by conventional endoscopy. Furthermore, we can demonstrate the 3-dimensional relationship between the native aorta, prosthetic graft, and duodenum. This method may become a new diagnostic approach to secondary aortoenteric fistula.

## REFERENCES

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